



## MFDOME+ STANDARD & OVERDRIVE USER'S GUIDE

### PREAMBLE

This notice includes all the advice and warnings that enables a correct set up and a safe use of the product. TPL Vision can not be responsible for the bad use of the notice. If so, TPL Vision cancels the guarantee's effects.



### ■ UNPACKING

Products are packed in our factory, using suitable materials for a safe transport through the usual means of transportation, in France and abroad. However, a damaged package must be reported to the carrier on delivery. Hand-written reservations must be indicated on the delivery order. Moreover, please send a letter or an email to TPL Vision as soon as possible (up to 24 hours after the delivery). If the transportation damage has not been stipulated on the delivery order and reported to TPL Vision in time, the package will not be taken back nor exchanged. To open the package, do not use any cutting blade so as to avoid damages on the product. Please use the delivered accessories, if needed (do not use any other products or equivalents to replace the delivered accessories).

### ■ RISK CLASS

The EN-62471 norm about lighting fluxes enables the classification of led lightings in 4 distinct groups, according to their hazardousness degree. Please find below an indicative table, recapitulating the classes of risk for our standard products.

| Colour                              | Class | Risk     |
|-------------------------------------|-------|----------|
| White WHI, Green 525 nm, Red 630 nm | 0     | none     |
| UV 405 nm, Blue 470 nm, IR 850 nm   | 1     | low      |
| UV 365 nm                           | 2     | moderate |
| UV 385 nm                           | 3     | high     |

In all cases, TPL Vision recommends the use of **the protection glasses** that are listed in its catalog.

For more information about photo-biological risks, do not hesitate to contact us.

TPL Vision can provide calculation notes about **the nominal distance of eye risks** (security distance).



**BEWARE to the infrared light**, invisible to the eyes.

To know if the light is on, please refer to the LED indicators.



# MEDIUM FLAT MFDOME+ STANDARD & OVERDRIVE

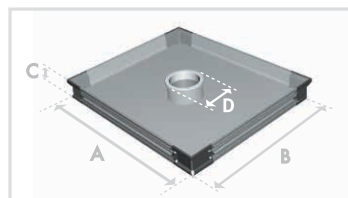
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### DIMENSIONS

| Length<br>(mm) |            | Width<br>(mm) |           | Height<br>(mm) | Height with<br>fixing plate<br>(mm) | Diameter of<br>central<br>hole (mm) |
|----------------|------------|---------------|-----------|----------------|-------------------------------------|-------------------------------------|
| A              |            | B             |           | C              | C + 10 mm                           | D                                   |
| Min : 200      | Max : 1900 | Min : 200     | Max : 900 | 45             | 55                                  | 65                                  |

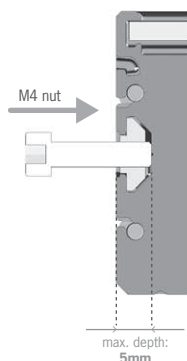
- **Useful surface:** A x B
- **Max. useful surface:** 0.88 m<sup>2</sup>
- **Max. useful perimeter:** 4.5 m
- **Total surface (connector excluded):** (A + 4mm) x (B + 4mm)



### FIXING ON THE MACHINE

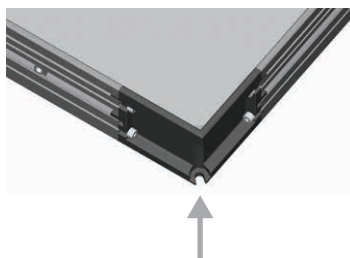
During the set up, the light has to be switched off and unplugged. Please use the fixing groove or holes designed for that purpose. We recommend the using of nuts (supplied) in the groove or M4 screws (not supplied) with a tightening torque from 0.5 to 1.5 Nm. We also recommend the use of a threadlocker (not supplied) to avoid any risk of loosening.

#### FIXING ON THE LENGTH (groove)



(4 M4 nuts – supplied)

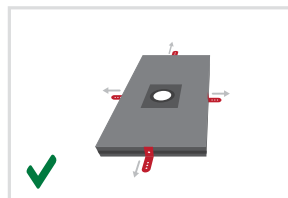
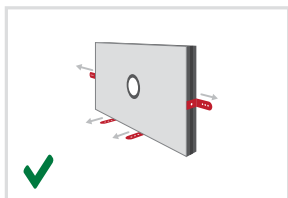
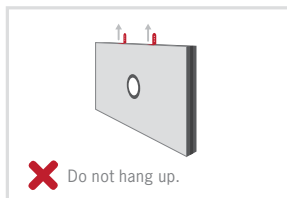
#### FIXING ON THE CORNER



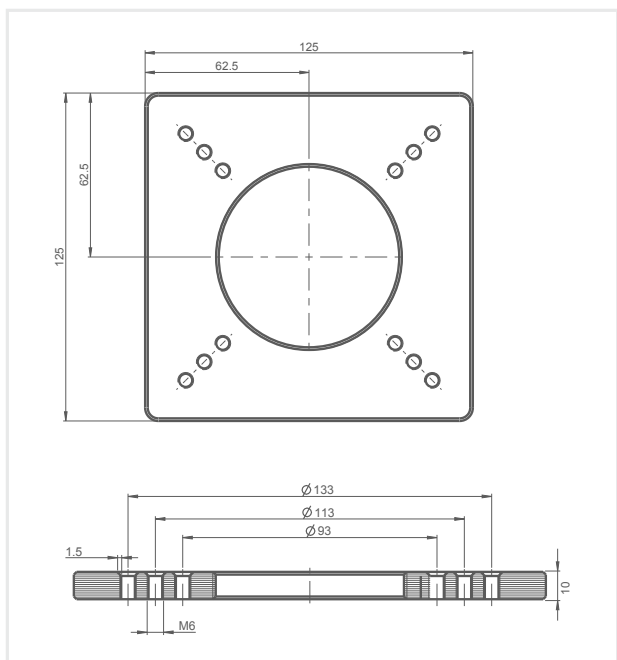
(CHC screw M3x20 – not supplied)



**⚠ BEWARE** to the use of angle brackets.



## ■ CAMERA FIXING



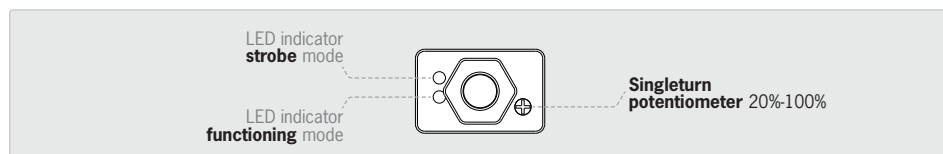
|         |        |
|---------|--------|
| Length: | 125 mm |
| Width:  | 125 mm |
| Height: | 10 mm  |
| Screw:  | M6     |










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## LED INDICATORS & POTENTIOMETER



## WIRING

| STANDARD VERSION  |  | OVERDRIVE VERSION   |  |
|---|--|---|--|
| SURFACE $\leq 0.5\text{M}^2$ :<br>1 wiring  | SURFACE $> 0.5\text{M}^2$ :<br>1 wiring  | SURFACE $\leq 0.25\text{M}^2$ :<br>1 wiring   | $0.25\text{M}^2 < \text{SURFACE} < 0.88\text{M}^2$ :<br>2 wirings  |
| <br>M12 connector<br>or<br><br>Cable | <br>Cable | <br>M12 connector<br>or<br><br>Cable | <br>M12 connector<br>and<br><br>Cable |

## POTENTIOMETER SETTING

### STANDARD VERSION:

- Lowest level of the potentiometer: 20% of the power.
- Highest level of the potentiometer: 100% of the power (350mA/led).

### OVERDRIVE VERSION:



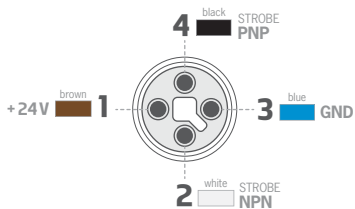
When the product is delivered, the potentiometer is set at 30%, and the product can be used in continuous mode. To use it in Overdrive (lighting power x3 when the potentiometer is set at 100%), you must **absolutely respect** a maximum lighting time of 3ms and a maximum duty cycle of 10%.



## CONNECTION

### M12 Connector 4 male points

#### POWER CONNECTOR - T CODING



#### STROBE mode :

PNP : from 5 to 24V for 100% ON. From 0 to 1V for 100% OFF.  
NPN : less than 1V for 100% ON. Above 2V for 100% OFF. Max 20V.

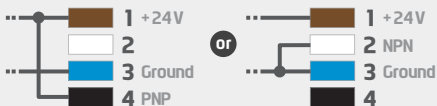
#### STROBE PNP :



#### STROBE NPN :



#### CONTINUOUS MODE :



Voltage drop for Connector M12 + wire 10 meters:  
(Minimum Voltage at the product input: 20VDC)

1.15V @ 5A

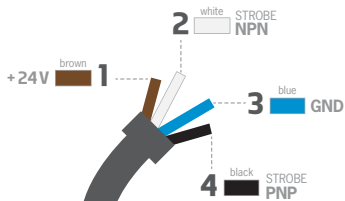
2.3V @ 10A

3.5V @ 15A

4.6V @ 20A

MAX 20A

### Cable 4 wires



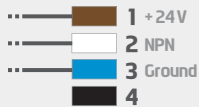
#### STROBE mode :

PNP : from 5 to 24V for 100% ON. From 0 to 1V for 100% OFF.  
NPN : less than 1V for 100% ON. Above 2V for 100% OFF. Max 20V.

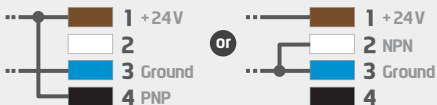
#### STROBE PNP :



#### STROBE NPN :



#### CONTINUOUS MODE :



Voltage drop for Cable 10 meters:  
(Minimum Voltage at the product input: 20VDC)

1.15V @ 5A

2.3V @ 10A

3.5V @ 15A

4.6V @ 20A

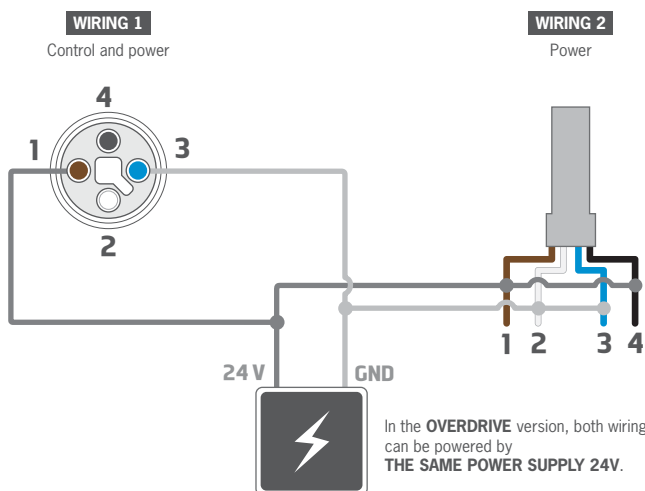
MAX 20A



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## Overdrive version Wiring recommendation



## TECHNICAL INFORMATION

| FEATURES                       | MFDOME+   | MFDOME+ Overdrive   |
|--------------------------------|---|---|
| Consumption                    | 1,32W par 25cm <sup>2</sup><br>in peak and on average   | 3W/25cm <sup>2</sup> in peak max<br>0,43W/25cm <sup>2</sup> max<br>on average (3ms@10%) |
| Min. functioning Voltage       | 20V in the light input  |   |
| Normal functioning Voltage     | 24V in the light input (±10%)   |   |
| Max. functioning Voltage       | 30V in the light input  |   |
| Max. consumption Strobe signal | 5mA   |   |
| Operating temperature          | -10° to +40°C / 80% of humidity without condensation<br>No thermal shock (max temperature variation: 10°C in 24h) |   |



## ■ USER SECURITY

**Do respect the power supply voltages and the connection terminals.**

**Do not modify or dismantle all or part of the product.**

**Do not connect or clean when power is on.**

**Do not watch the lighting source directly, and follow the advice below :**



- If the workstation enables it, interpose a filter that will stop the lighting radiation under fixed or adjustable frame between the source and the operator.
- When these measures cannot be implemented, supply the operators with glasses (class 4) available for sale at TPL Vision, or with a dedicated protective mask, that will stop the lighting radiation.
- Forbid or limit the direct access to the lighting source (exposure into the radiation axis).
- Establish a security perimeter so as to prevent the operators from approaching the lighting source beyond the recommendations of the manufacturer, as for eye irritation is concerned.
- In any case, ensure that the chosen means properly reduce the exposition quantities (features of screens or glasses to be chosen, according to the wavelengths that the operators are exposed to).

## ■ EQUIPMENT MAINTENANCE

### **CLEANING (when the product is switched off)**

Please use a soft and dry cloth.

Do not use any abrasive material.

Do not use any cleaning solvent or aggressive chemical product – isopropyl alcohol.



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